

Amendments to the Claims

Listing of Claims:

Original Claims 1-23 (canceled).

Claim 24 (new). A control configuration for an occupant protection device in a motor vehicle, the control configuration comprising:

a sensor field having at least two acceleration sensors, said acceleration sensors having at least two sensor elements allowing acceleration sensing along three sensitivity axes;

said sensitivity axes of said sensor elements of said acceleration sensors spanning a plane, said plane, after integrating the control configuration in a motor vehicle, being substantially parallel to a plane defined by a longitudinal axis of the vehicle and a transverse axis of the vehicle;

at least one evaluation device including:

for a normal or crash mode:

a safing routine to test plausibility of all output signals of said sensors by creating a weighted sum from the output signals, and

a crash routine to evaluate the output signals; and

for a test mode:

a test routine sending a test signal to at least two of said
acceleration sensors to generate output signals to test operation of
said sensors;

at least one test signal to be modified with a weighting device by a
predefinable weighting factor causing at least one of said
acceleration sensors to output a weighted output signal; and

during the test routine, the output signals of said acceleration
sensors disposed in said sensor field to be processed according to
the safing routine;

the weighted sum of the output signals producing a
predefined value when said acceleration sensors are capable
of operation; and

error-free operation of the control configuration being able to
be determined when the weighted sum of the output signals
actually supplied during the test routine approximately
produces the predefined value.

Claim 25 (new). The control configuration according to claim 24, wherein said sensor field has three of said acceleration sensors each having a sensor element for one respective sensitivity direction.

Claim 26 (new). The control configuration according to claim 24, wherein said sensor field has a first one of said acceleration sensors with a sensor element for a predefined sensitivity direction and a second one of said acceleration sensors with two sensor elements for two predefined sensitivity directions.

Claim 27 (new). The control configuration according to claim 24, wherein said at least two acceleration sensors include a first acceleration sensor with a sensor element for a predefined sensitivity direction and a second acceleration sensor with a sensor element for two predefined sensitivity directions.

Claim 28 (new). The control configuration according to claim 24, wherein said weighting device is part of at least one of said evaluation device or said acceleration sensors.

Claim 29 (new). The control configuration according to claim 24, wherein said weighting device includes at least one of a plurality of test fingers, a voltage-reducing component such as a resistor, a voltage-increasing component such as a charging pump, another suitable electronic component, or another suitable mechanical component.

Claim 30 (new). A method for testing operation of a control configuration for an occupant protection device in a motor vehicle, which comprises the following steps:

providing a sensor field including at least two acceleration sensors having at least two sensor elements allowing acceleration sensing along three sensitivity axes;

spanning a plane with the sensitivity axes of the sensor elements of the acceleration sensors, the plane, after integrating the control configuration in a motor vehicle, being substantially parallel to a plane defined by a longitudinal axis of the vehicle and a transverse axis of the vehicle;

providing at least one evaluation device:

in a normal or crash mode:

testing plausibility of all output signals of the sensors with a safing algorithm by creating a weighted sum from the output signals, and

evaluating the output signals with a crash discrimination algorithm;
and

in a test mode:

sending a test signal to at least two acceleration sensors to generate output signals to test operation of the sensors;

subjecting at least one test signal to a weighting causing at least one acceleration sensor to output a weighted output signal; and

in the test mode, processing the output signals of the acceleration sensors disposed in the sensor field according to the safing algorithm;

producing a predefined value with the weighted sum of the output signals when the acceleration sensors are capable of operation; and

possibly determining error-free operation of the control configuration, when the weighted sum of the output signals actually supplied in the test mode approximately produces the predefined value.

Claim 31 (new). The method according to claim 30, which further comprises comparing at least one of the output signals with a threshold value, and releasing the safing algorithm only when at least one of the output signals exceeds the threshold value.

Claim 32 (new). The method according to claim 30, which further comprises supplying the at least one test signal to a control circuit of the sensors for electronically generating or simulating an output signal.

Claim 33 (new). The method according to claim 30, which further comprises supplying the at least one test signal to the sensor elements of the sensors for displacing a seismic mass of the sensor elements in a predefined direction.

Claim 34 (new). The method according to claim 30, which further comprises providing a safing sensor having a sensor element with a sensitivity axis disposed at an oblique angle, in particular at an angle of 45°, 135° or 225°, to two mutually perpendicular sensitivity axes.

Claim 35 (new). The method according to claim 34, which further comprises providing two sensors each having a sensor element with a sensitivity axis being mutually perpendicular.

Claim 36 (new). The method according to claim 34, which further comprises providing an x-y sensor having two sensor elements each with a sensitivity axis being mutually perpendicular.

Claim 37 (new). The method according to claim 34, which further comprises providing an x-y sensor having a sensor element with two sensitivity axes being

mutually perpendicular.

Claim 38 (new). The method according to claim 30, which further comprises:

displacing seismic masses of two sensor elements in a predefined direction or generating or electronically simulating corresponding signals, by performing the following two steps in either order:

displacing the seismic mass of the sensor element of a first acceleration sensor with weighted force in a direction opposite to its sensitivity axis or generating or electronically simulating a corresponding signal, and

displacing the seismic mass of the sensor element of a second acceleration sensor with unweighted force in a direction of its sensitivity axis or generating or electronically simulating a corresponding signal.

Claim 39 (new). The method according to claim 38, which further comprises setting a weighting factor of half the root of two.

Claim 40 (new). The method according to claim 30, which further comprises:

displacing seismic masses of three sensor elements in a predefined direction or generating or electronically simulating corresponding signals, by performing the following three steps in any order:

displacing the seismic mass of the sensor element of a first acceleration sensor with weighted force in a direction opposite to its sensitivity axis or generating or electronically simulating a corresponding signal;

displacing the seismic mass of the sensor element of a second acceleration sensor with unweighted force in a direction of its sensitivity axis or generating or electronically simulating a corresponding signal; and

displacing the seismic mass of the second or a third sensor element of the acceleration sensors with unweighted force in a direction of its sensitivity axis or generating or electronically simulating a corresponding signal.

Claim 41 (new). The method according to claim 40, which further comprises setting a weighting factor of the root of two.

Claim 42 (new). The method according to claim 30, which further comprises providing a star-shaped configuration of three sensors each having a sensor element with sensitivity axes mutually disposed at an angle, in particular at an angle of 120°.

Claim 43 (new). The method according to claim 30, which further comprises displacing the seismic masses of three sensor elements in a predefined direction or generating or electronically simulating corresponding signals.

Claim 44 (new). The method according to claim 43, which further comprises setting a weighting factor of 2.

Claim 45 (new). The method according to claim 30, which further comprises setting the weighted sum of the output signals to be approximately zero, for diagnosing error-free operation of the control configuration in the test mode.

Claim 46 (new). The method according to claim 33, which further comprises performing a capacitive test displacement of the seismic mass of the acceleration sensors.